

Appl. No. 10/725,526

REMARKS/ARGUMENTS

The Applicant thanks the Examiner for his detailed comments in the "Response to Arguments" section of the Final Action.

In light of these comments, the Applicant requests entry of the claims as amended above. As further explained in the remarks below, the claims as now amended are believed to address fully all of the outstanding issues identified in the Final Action, and are believed to place this application in proper condition for allowance.

Claim 1 is amended above to make it clear that the at least one voltage sensor sense power supply voltage at at least one point in the power distribution network, and that each of the power sources is responsive to the sensed power supply voltage for supplying a regulated current or a regulated power to the power distribution network. This clarifies the distinctions of claim 1 from the applied reference, Rock U.S. Patent No. 6,121,693, as further discussed below. Claims 2 and 3 contain corresponding and consequential amendments.

Similarly, claim 9 is amended above to recite sensing voltage of the supplied power at at least one point in the distribution network, and a corresponding amendment is made in claim 10.

Furthermore, claim 15 is amended above to incorporate wording from claim 17 and to make it clear that it is a power supply voltage that is sensed. Thus claim 15 as amended recites "at least one power supply voltage sensor for sensing a power supply voltage at a respective point in the power distribution network for regulating the power supplied to the power distribution network from the plurality of power sources". Accordingly, claim 17 is now cancelled and consequential amendments are made in claim 19.

Thus each of claims 1, 9, and 15 recites sensing a power supply voltage at at least one point in the power distribution network. This is not disclosed or suggested by Rock.

In this respect the Final Action states "Rock describes both in the specification and claims

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measuring a voltage comparing said voltage measurement to a threshold voltage within the power distribution apparatus see for example claim 5."

Rock discloses, for example in claim 5 and in Fig. 4 and its description, an arrangement of components 100-109 in which a voltage at the output of an amplifier 105 is compared with a threshold voltage 109 in a comparator 106. This voltage at the output of the amplifier 105 represents the supply current passing through the resistor 100; this is clear from the circuit arrangement, from the words "Current Measurement" in Fig. 4, from column 5, lines 36-38 reciting "current shunt 100a produces a voltage proportional to load current I_l drawn by load 86a", from column 5, lines 40-42 reciting "The output of this amplifier 105a is proportional to the load current passing through resistor 100a", and from claim 5, lines 11-12 reciting "a supply current measurement converting current in said supply into a measurement voltage".

Thus Rock discloses producing a voltage that represents supply current. This voltage does not represent power supply voltage, or voltage of the supplied power, as now recited in the claims of this application. Rock does not disclose or suggest any sensing of power supply

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measuring a voltage comparing said voltage measurement to a threshold voltage within the power distribution apparatus see for example claim 5.".

Rock discloses, for example in claim 5 and in Fig. 4 and its description, an arrangement of components 100-109 in which a voltage at the output of an amplifier 105 is compared with a threshold voltage 109 in a comparator 106. This voltage at the output of the amplifier 105 represents the supply current passing through the resistor 100; this is clear from the circuit arrangement, from the words "Current Measurement" in Fig. 4, from column 5, lines 36-38 reciting "current shunt 100a produces a voltage proportional to load current I_l drawn by load 86a", from column 5, lines 40-42 reciting "The output of this amplifier 105a is proportional to the load current passing through resistor 100a", and from claim 5, lines 11-12 reciting "a supply current measurement converting current in said supply into a measurement voltage".

Thus Rock discloses producing a voltage that represents supply current. This voltage does not represent power supply voltage, or voltage of the supplied power, as now recited in the claims of this application. Rock does not disclose or suggest any sensing of power supply voltage in the power distribution network, as required by the claims of this application as now amended.

The Final Action also states: "Measuring a voltage at a point is sufficient to anticipate the limitation of sensing a voltage at a point.". Claims 1, 9, and 15 are amended as discussed above to refer to sensing power supply voltage; Rock discloses measuring or sensing power supply current, and his measurement as described does not measure or sense power supply voltage.

Considering the specific wording of the claims as now amended, claim 1 recites that the arrangement comprises "at least one voltage sensor for sensing power supply voltage at at least one point in the power distribution network"; claim 9 recites "sensing voltage of the supplied power at at least one point in the power distribution network"; and claim 15 recites "at least one power supply voltage sensor for sensing a power supply voltage at a respective point in the power distribution network". Rock does not disclose or suggest any such voltage sensor. Accordingly, these claims clearly distinguish the invention from Rock.

Claims 1, 9, and 15 also further distinguish the invention from Rock by reason of their

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further recitals. Specifically, claim 1 also recites that "each of the power sources is responsive to the sensed power supply voltage for supplying a regulated current or a regulated power to the power distribution network"; claim 9 also recites "regulating currents supplied by the plurality of power sources to the power distribution network in dependence upon the sensed voltage"; and claim 15 also recites that the power supply voltage sensor is "for regulating the power supplied to the power distribution network from the plurality of power sources".

Thus each of these claims requires that the current or the power supplied from the power sources is regulated in dependence upon the voltage sensing. The invention is also clearly distinguished from Rock in this respect. In Rock, there is no voltage sensing as required by these claims, and hence there can be no regulation in dependence upon such voltage sensing as claimed.

Further, despite the comments in the Final Action regarding interpretation of the term "regulate", the Applicant maintains that there is no regulation of either current or power disclosed by Rock.

More particularly, claims 1, 9, and 15 clearly require that current or power not only be supplied from the power sources but also be regulated. For example, claim 1 recites that each of the power sources is responsive to the sensed power supply voltage "for supplying a regulated current or a regulated power" to the power distribution network. Clearly this requires both supply and regulation of the current or power.

The Final Action contends that in Rock "each of the power sources is responsive (switched off) to the sensed voltage for supplying a regulated current or a regulated power to the power distribution network". If due to a high current the power source is switched off or isolated as described in Rock, and if this constitutes regulation – which the Applicant maintains it does not on any reasonable interpretation under *In re Yamamoto* referred to in the Final Action – then in Rock the current or power is either supplied or it is regulated, but not both as required by the claims of this application.

However, such a mis-interpretation of Rock is clearly contrary to the clear description and recitals in Rock. Rock clearly shows in Fig. 5, line 110 an output current that rises with time

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until it reaches the threshold level, in this case 4 Amps, when the current is interrupted and falls to substantially zero. See also column 6, lines 4-10. Clearly there is no regulation of current here. As power is a product of voltage and current, clearly there is also no power regulation here.

The Final Action contends with respect to regulation that "Rock fixes the amount", but this is not clear: the amount of what? As clearly shown by his Fig. 5, Rock does not fix either the current or the power. The supplied current (and hence power) is neither fixed nor regulated, and simply rises until a limit is reached when it is interrupted and no longer supplied.

For at least each of the above reasons, it is respectfully submitted that the claims of this application as now amended clearly and patentably distinguish the present invention from Rock, and are allowable. Reconsideration, and consequent allowance, of the application is therefore courteously requested.

In the event that there are any further issues concerning this application, it is respectfully requested that the Examiner telephone John Haley at 613-225-0590 in order that these may be expeditiously addressed.

In view of the foregoing, early favourable consideration of this application is earnestly solicited.

Respectfully submitted,

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Date: October 23, 2006

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